

2002 AMERICAN OYSTERCATCHER BREEDING ACTIVITY CAPE HATTERAS NATIONAL SEASHORE

The breeding activities of American Oystercatchers (*Haematopus palliatus*) were monitored at Cape Hatteras National Seashore (CAHA) in 2002. This was the fourth consecutive year of monitoring activity along the entire beach habitat within CAHA. By the first week in April, traditional nesting territories were protected with symbolic fencing. Additional sites were posted as these solitary-nesting birds established territories.

Productivity

This year, 31 pairs of oystercatchers produced 48 nests (Table 1). Of these, 10 nests (21%) hatched (Chart 1) and 38 nests (79%) were unsuccessful. Of the 19 chicks produced, nine (47%) reached fledgling age (Chart 2). Overall productivity was 0.29 fledglings per breeding pair. While these numbers are lower than last season's figures, they are higher than those in 1999 and 2000 (Chart 1). In 2001, 48% of the nests hatched and 57% of the chicks fledged for a final productivity rate of 0.62 (Table 2). In 2000, 35% of the nests hatched and 28% of the chicks fledged resulting in a productivity level of 0.24 (Table 3). In 1999, 28% of the nests hatched and 22% of the chicks fledged with a final productivity rate of 0.12 fledglings per breeding pair (Table 4). Not included in the above analysis is the single sighting of an adult with an unfledged chick observed on Green Island, a flood tide delta shoal at Oregon Inlet.

Breeding efforts varied between islands within CAHA. In 2002, four of five nesting attempts failed for two known breeding oystercatcher pairs on Bodie Island (Table 1, Chart 1). Productivity on Bodie Island was 1.00 fledglings per breeding pair. This was higher than 2001 when productivity was 0.50 fledglings per breeding pair. No successful nesting occurred here in 1999 and 2000 (Tables 3 and 4, Chart 1). The 17 nesting pairs on Hatteras Island produced 25 nests. Of those 12% hatched. Of the five chicks produced, four (80%) survived to fledgling age. Oystercatcher breeding productivity on Hatteras Island was 0.24, the second highest year since monitoring began (Table 1, Chart 1). Breeding success on Ocracoke Island was lower than the past two years. This year, 12 pair produced 18 nests. Nest success was 33%; chick survival rate was 17%. Three chicks fledged on Ocracoke Island in 2002. This equates to a productivity rate of 0.25, a significant decrease over last year's figure of 1.07 (Table 1 and 2). In 1996, CAHA staff initially monitored breeding activity on Ocracoke Island where productivity among 12 nesting pair was 0.66. Other islands were not included in this 1996 survey.

Factors Influencing Productivity

Of the 38 unsuccessful oystercatcher nests, 12 (or 32%) were known to have been lost to predation. They include 11 clutches lost to fox (*Vulpes vulpes*) and one lost to an unknown predator. That site showed evidence of cat (*Felis domesticus*), crow (*Corvus spp.*) and ghost crab (*Ocypode quadrata*) tracks leading up to the nest. In addition, there was one case of nest loss where fox tracks could be seen leading up to the empty nest; however, the nest had also been run over by an off-road vehicle that drove through the posted closure. It could not be determined which had caused the demise of the nest. Eight (21%) nests were lost during weather events with

heavy rains, high winds and tides, and one nest was abandoned after a storm. The largest proportions of failed nests (42%) were due to unknown causes. In these 16 cases, eggs disappeared without definitive evidence of causes.

Of the 19 chicks produced, a total of ten (53%) were lost (Table 1). All chicks were lost to unknown causes. One chick was not observed after a storm event with high winds.

American oystercatchers require large undisturbed areas to successfully breed. Frequent human disturbance can cause the abandonment of nest sites as well as direct loss of eggs and chicks. It is unknown to what degree human activities directly or indirectly impact nesting efforts within CAHA. This year, 39 of the 48 nests were located in areas normally used by off-road vehicles. Of these, seven nests (18%) successfully hatched and five nests produced fledglings. Six (67%) of the nine oystercatcher fledglings at CAHA were found in areas seasonally closed to ORV traffic. One unsuccessful nesting attempt was in a day-use area. These beach sites are served by adjacent parking lots and have heavy pedestrian use. As in the past two years, no breeding activity was found on beaches adjacent to villages. These beaches have the highest concentrations of pedestrian beach users found at CAHA. Eight clutches (17%) were found in "other" sites, not classified as day use or ORV sites. On a day to day basis, these areas were exposed to the least amount of potential human disturbance. Three of the eight nests (38%) hatched. Two broods produced three (33%) of the total fledglings at CAHA. The "other" sites category had the highest percentage of nest success and produced fledglings proportionately similar to ORV sites.

Incidents of visitors entering posted bird closures at CAHA were documented between April and September of 2002. These closures did not only represent sites where American Oystercatchers nested but also colonial waterbirds and the threatened Piping Plover (*Charadrius melodus*) as well. Most illegal entries were not witnessed but documented based on vehicle or pedestrian tracks left behind. Numbers are conservative since some individual records involved more than one vehicle or pedestrian. A total of 52 incidents were recorded of ORV's entering posted bird closures. This number is similar to the 63 incidents recorded in 2001 and 58 vehicle entries documented in 2000. Of the 52 incidents reported in 2002, two occurred on Bodie Island, 36 on Hatteras Island and 14 on Ocracoke Island. These incidents required, at minimum, repairs to twine strung between posts but often involved the replacement of broken posts and signs. Illegal pedestrian entry in bird closures numbered 133, compared to 247 incidents recorded last year. In 2002, 45 occurred on Bodie Island, 85 on Hatteras Island and three on Ocracoke Island. Contacts were made with several people found defecating within the posted area. Judging by the amount of human feces and toilet paper left behind, this was one of the main reasons people entered the closures. Other people contacted said they thought the closures were only for ORVs' though the signs clearly stated pedestrian entry was also prohibited. Each entry required visitors to lift and stoop under the string that connected all posted signs. Unintentional human disturbance may have resulted if closures did not supply ample undisturbed habitat.

Predator Removal

Red fox populations have been expanding their range southward in CAHA. They were first reported on Bodie Island in 1996 and on Hatteras Island in 2000. Their presence has impacted

all ground nesting birds at Oregon Inlet flats, Cape Hatteras Lighthouse beach, Cape Point, South beach and Hatteras Inlet spit. The new Hatteras Island fox population likely used the Bonner Bridge as a corridor to the island last year. Mel Covey, a Buxton resident, observed a red fox moving south on the bridge in 1999. This route may be continuing. Kris Fair of Pea Island Wildlife Refuge observed a dead red fox on the bridge approximately 100 yards from the northern terminus in October 2002. There are no historical records of red fox on Hatteras Island. In 2001, fox depredation was recorded on threatened loggerhead turtle eggs and hatchlings. Fox causing abandonment targeted two plover nests protected by predator exclosures. American Oystercatcher nests were also targeted by this highly efficient predator. Based on the continued and growing danger fox present to threatened species, CAHA decided to trap red fox. Trapping was concentrated on Hatteras Island where the population was lowest. Funds were procured with the help of U.S. Fish and Wildlife Service. Professional trappers from the US Department of Agriculture made two trips to the area in late June and July. Twelve fox were removed from Hatteras Island between Cape Point and Hatteras Inlet in June. In addition, 12 animals were removed from the dunes adjacent to the Bodie Island spit flats and the Bodie Island "bone yard". In July an additional four fox were taken from Bodie Island, all from the same dune field area near the inlet flats. No fox were successfully trapped from Hatteras Island in July. Unfortunately for the oystercatchers, 11 nests were already lost to red fox before trapping began in June. It is hoped that the birds will reap the benefits on Hatteras Island in the 2003-breeding season since the trappers felt they removed all but a few fox. Bodie Island, with a much higher fox population, will take a more prolonged effort to reduce canid numbers.

Research

Dr. Ted Simons of North Carolina State University (NCSU) has been monitoring American Oystercatcher breeding success at Cape Lookout for five seasons. He has also been reviewing data collected at CAHA over the past four years. He theorizes that relatively low productivity levels may be sufficient to maintain populations of these long-lived birds *if* adult and sub-adult survivorship is high. Survivability levels are unknown at this point. Banding breeding adults and their chicks should provide answers to this question. This is the first year banding has been attempted within CAHA. Conor McGowen of NCSU successfully banded five adults and six chicks. Locating wintering roost sites in North Carolina and other states would also facilitate this. Numbers of adults and sub-adults in these roosts could be surveyed over successive years. An initial aerial survey was conducted on January 8, 2002. No groups of roosting American Oystercatchers were found along the shores of CAHA, Pea Island Wildlife Refuge or adjacent sound islands. Roosts were found on three islands in the Beaufort/Morehead City area of Core Sound. Numbers totaled approximately 150 birds.

Conclusion and Recommendations

American Oystercatcher breeding efforts at CAHA were not highly successful in the past four years. Both hatching and fledgling successes were low. However, four years of data for Ocracoke Island show some degree of variability on this island, with some years being significantly more productive than others. Higher productivity levels on Ocracoke Island may be associated with less human disturbance, lower predation levels and/or abundant food availability. It is not known at this time what levels of productivity are required to sustain the population.

CAHA would like to thank their local non-profit cooperative association, Eastern National for a donation assisting NCSU in their American Oystercatcher project. Eastern National's grant program is designed to support research in National Park Service units. At the time of this writing, partial funding has been acquired to continue NCSU work at CAHA in 2003.

Funds should be allocated for the continued removal of red fox as well as feral cats.

Submitted by:
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LIST OF ATTACHMENTS

Appendix A – Nest Detail of American Oystercatchers CAHA

Appendix B –American Oystercatcher Breeding Activity at CAHA 2002

Table 1. American Oystercatcher Breeding Activity at Cape Hatteras National Seashore 2002

Table 2. American Oystercatcher Breeding Activity at Cape Hatteras National Seashore 2001

Table 3. American Oystercatcher Breeding Activity at Cape Hatteras National Seashore 2000

Table 4. American Oystercatcher Breeding Activity at Cape Hatteras National Seashore 1999

Chart 1. American Oystercatcher Nest Success 1999-2002

Chart 2. American Oystercatcher Fledgling Success 1999-2002

Supplement A – American Oystercatcher Banding data from North Carolina 2002;

Conor McGowan, NCSU

Supplement B – American Oystercatcher Banding data from Cape Hatteras, North Carolina 2002, Conor McGowan, NCSU

Map - American Oystercatcher Nests Bodie Island 2002

Map - American Oystercatcher Nests Hatteras Island 2002

Map - American Oystercatcher Nests Ocracoke Island 2002

Appendix B

American Oystercatcher Breeding Activity Summary at Cape Hatteras National Seashore 2002

Pair #*	Nest #	location	GPS	Zone **	# eggs	Date nest discovered	date egg loss observed (cause)	hatching date if known; # of chicks	date chick loss observed (cause)	date fledging observed; # fledged
Bodie Is.										
1	B1	Oregon Inlet flats, off SE corner of Oregon Inlet Bird closure	35°46.750 075°32.024	ORV	1	5/1/02	5/08/02 fox	N/A	N/A	N/A
1	B3	Outside south-east corner of Oregon Inlet Bird Closure	35°46.766 075°32.113	ORV	3	5/20/02	5/25/02 fox or ORV(?)	N/A	N/A	N/A
1	B5	Off south side of Oregon Inlet Bird Closure	35°46.665 075°32.124	ORV	2	6/4/02	N/A	7/01/02 2 chicks	N/A	8/13/02 2 chicks
2	B2	Oregon Inlet flats; SE side, nest to pile of pier pilings	35°46.612 075°32.005	ORV	2	5/12/02	5/22/02 weather/ nest abandoned	N/A	N/A	N/A
2	B4	Off east side of Oregon Inlet Bird Closure	35°46.876 075°32.143	ORV	3	5/26/02	6/04/02 fox	N/A	N/A	N/A
Hatteras Is.										
1	H1	South Beach, 1.2 miles south of Ramp 45	35°15.056 075°32.015	ORV	3	4/18/02	5/17/02 unknown	N/A	N/A	N/A
1	H19	South Beach, 1.1 miles south of Ramp 45	35°14.074 075°33.942	ORV	2	5/31/02	6/11/02 fox	N/A	N/A	N/A
2	H2	South Beach; .8 miles south of Ramp 45	35°15.156 075°32.015	ORV	3	4/25/02	5/18/02 unknown	N/A	N/A	N/A
2	H20	South Beach; .8 miles south of Ramp 45	35°14.045 075°33.659	ORV	3	5/31/02	6/9/02 fox	N/A	N/A	N/A
3	H3	South Beach; just south of "Salt Pond Rd"	35°15.056 075°32.015	ORV	3	4/25/02	5/3/2002 unknown	N/A	N/A	N/A
3	H13	South Beach; .2 miles south of "Salt Pond Rd"	35°13.807 075°32.586	ORV	3	5/17/02	6/7/02 fox	N/A	N/A	N/A
4	H4	Hatteras Inlet; .8 miles south of ramp 55 - Prickly pear" pair	35°15.056 075°44.276	ORV	2	4/26/02	5/4/2002 unknown	N/A	N/A	N/A

4	H12	Hatteras Inlet; .8 miles south of ramp 55 - Prickly pear" pair	35°11.971 075°43.044	ORV	2	5/15/02	5/20/02 possible weather	N/A	N/A	N/A
5	H5	Hatteras Inlet; Ramp 57; "Corner Closure"	35°11.556 075°44.276	ORV	3	4/27/02	5/8/02 unknown	N/A	N/A	N/A
5	H14	Hatteras Inlet; Ramp 57; "Corner Closure"	35°11.554 075°44.284	ORV	2	5/18/02	5/20/02 possible weather	N/A	N/A	N/A
6	H6	Hatteras Inlet, just N of main closure	35°11.427 075°44.589	ORV	1	4/27/02	5/3/02 unknown	N/A	N/A	N/A
6	H21	Hatteras Inlet Bird Closure; just S of end of interdunal road	35°11.555 075°44.291	ORV	1	6/5/02	6/10/02 fox	N/A	N/A	N/A
7	H7	Hatteras Inlet; .9 miles south of Ramp 44	35°11.967 075°43.126	ORV	1	4/28/02	5/3/02 unknown	N/A	N/A	N/A
8	H8	Cape Point; ca. .9 miles south of Ramp 44	35°13.461 075°31.993	ORV	3	5/6/02	5/10/02 unknown	N/A	N/A	N/A
9	H9	Cape Point; Between shipwreck and Salt Pond Rd	35°13.696 075°32.336	ORV	3	5/7/02	5/15/02 fox	N/A	N/A	N/A
9	H16	Cape Point; .1 mile east of shipwreck	35°13.596 075°32.220	ORV	2	5/25/02	6/7/02 fox	N/A	N/A	N/A
10	H10	1.5 miles south of ramp 30	35°24.935 075°29.116	ORV	2	5/11/02	5/19/02 possible weather	N/A	N/A	N/A
10	H22	1.5 miles south of ramp 30	35°25.431 075°29.075	ORV	1	5/13/02	N/A	unknown	N/A	8/22/2002 fledged 1
11	H11	Hatteras Inlet; main bird closure behind amaranth plot	35°11.379 075°44.842	ORV	2	5/13/02	5/20/02 possible weather	N/A	N/A	N/A
12	H15	Hatteras Inlet; sound side - north of pond	35°14.783 075°32.002	ORV	3	5/24/02	5/29/02 unknown	N/A	N/A	N/A
13	H17	Buxton washout; 1.8 miles south of Ramp 38	35°17.060 075°30.925	other	2	5/4/02	N/A	unknown; 2 chicks	6/6/02 1 chick; unknown	7/26/02 fledged 1
14	H18	Buxton washout; .2 miles south of Ramp 38	35°16.154 075°30.978	other	2	5/31/02	N/A	unknown; 2 chicks	N/A	6/24/02 fledged 2

15	BH1	.8 miles south of Ramp 27	35°27.443 075°28.977	ORV	3	4/27/02	5/6/02 fox	N/A	N/A	N/A
16	BH2	1 mile south of Ramp 27; "The Waddles"	35°27.268 075°28.999	ORV	3	4/29/02	5/6/02 fox	N/A	N/A	N/A
17	BH3	1.1 miles north of Ramp 27	35°29.144 075°28.745	ORV	2	5/20/02	5/27/02 fox	N/A	N/A	N/A
Ocracoke Is.										
1	O1	1.4 miles SW of ramp 70	35°05.470 075°58.631	ORV	2	4/24/02	4/26/2002 unknown	N/A	N/A	N/A
1	O13	1.3 miles SW of ramp 70	35°05.493 075°58.631	ORV	2	5/24/02	6/4/02	N/A	N/A	N/A
1	O18	1.2 miles SW of ramp 70	35°05.587 075°58.509	ORV	2	6/13/02	N/A	07/13/2002 2 chicks	7/20/02 2 chicks; unknown	N/A
2	O2	1.9 miles NE of ramp 70	35°07.087 075°55.937	ORV	3	4/24/02	N/A	05/21/2002 3 chicks	5/21/02 2 chicks; unknown	7/1/02 fledged 1
3	O3	1.55 miles NE of ramp 70	35°06.940 075°56.217	ORV	3	4/27/02	6/17/2002 cat tracks, ghost crab, crow	N/A	N/A	N/A
4	O4	.5 miles NE of ramp 67	35°08.150 075°53.716	other	3	4/27/02	N/A	05/14/2002 2 chicks	5/17/02 1 chick; 6/7/02 1 chick; both unknown	N/A
5	O5	5.7 miles NE of ramp 67	35°10.007 075°49.290	other	2	4/27/02	5/6/2002 unknown	N/A	N/A	N/A
5	O9	3.1 miles SW of ramp 59	35°10.006 075°49.292	other	2	5/8/02	5/21/02	N/A	N/A	N/A
6	O6	Southpoint enclosure 2.2 miles SW of ramp 72	35°04.518 076°00.563	other	2	4/29/02	5/17/2002 flooding, bad weather	N/A	N/A	N/A
6	O15	Southpoint enclosure at christmas tree	35°04.561 076°00.279	ORV	3	6/4/02	N/A	06/26/2002 1 chick	6/29/02 1 chick; windy, bad weather	N/A

7	O7	Just NE of ramp 59	35°10.903 075°46.682	ORV	2	4/30/02	5/6/2002 unknown, heavy traffic area	N/A	N/A	N/A
7	O11	.3 miles NE of ramp 59	35°11.073 075°46.418	ORV	3	5/17/02	N/A	06/06/2002 2 chicks	6/11/02 1 chick; unknown	7/14/02 1 chick
8	O8	Southpoint enclosure 1.5 miles SW of ramp 72	35°07.087 075°55.937	ORV	2	5/6/02	5/20/2002 unknown, bad weather	N/A	N/A	N/A
9	O10	Southpoint enclosure center large dune soundside	35°04.262 076°00.621	ORV	2	5/8/02	5/20/2002 windy, bad weather	N/A	N/A	N/A
9	O16	Southpoint enclosure 2nd large dune by inlet	35°04.246 076°00.610	ORV	3	6/7/02	N/A	07/01/2002 2 chicks	7/16/02 1 chick; unknown	8/19/02 1 chick
10	O12	7.4 miles NE of ramp 67	unknown	other	3	5/22/02	5/29/2002 high, high tide	N/A	N/A	N/A
11	O14	3 miles SW of ramp 59	35°09.837 075°49.662	day use	3	6/3/02	6/21/2002- 6/25/02 unknown	N/A	N/A	N/A
12	O17	1 mile SW of ramp 59	35°10.549 075°47.751	other	1	6/11/02	7/2/2002 unknown	N/A	N/A	N/A
*Breeding pairs #s				**Zones						
B - Bodie Island pair				ORV - areas within off-road vehicle designated beaches						
H or BH - Hatteras Island pair				day use - beach areas of high pedestrian day use serviced by parking lots						
O - Ocracoke Island pair				village - beach areas of high pedestrian use fronting village boundaries						
				other - beach areas not having high pedestrian use and closed to off-road vehicles						

Table 1. American Oystercatcher Breeding Activity at Cape Hatteras National Seashore 2002

				Nests Lost or Abandoned						Chicks Fledged		Nests with Fledged Chicks		Productivity (fledglings/breeding pair)
Location	Pair	Nest	Egg			Nest	Hatch	Egg	Hatch					
	#	#	#	#	%	#	%	#	%	#	%	#	%	
Bodie Island	2	5	11	4	80%	1	20%	2	18%	2	100%	1	20%	1.00
Hatteras Island	17	25	57	22	88%	3	12%	5	9%	4	80%	3	12%	0.24
Ocracoke Island	12	18	43	12	67%	6	33%	12	28%	3	25%	3	17%	0.25
Totals	31	48	111	38	79%	10	21%	19	17%	9	47%	7	15%	0.29

Table 2. American Oystercatcher Breeding Activity at Cape Hatteras National Seashore 2001

				Nests Lost or Abandoned						Chicks Fledged		Nests with Fledged Chicks		Productivity (fledglings/breeding pair)
Location	Pair	Nest	Egg			Nest	Hatch	Egg	Hatch					
	#	#	#	#	%	#	%	#	%	#	%	#	%	
Bodie Island	2	3	6	2	67%	1	33%	2	33%	1	50%	1	33%	0.50
Hatteras Island	24	28	55	18	64%	10	36%	18	34%	6	33%	6	21%	0.25
Ocracoke Island	13	15	35	4	27%	11	67%	22	52%	17	77%	8	53%	1.07
Totals	39	46	96	24	52%	22	48%	42	44%	24	57%	15	33%	0.62

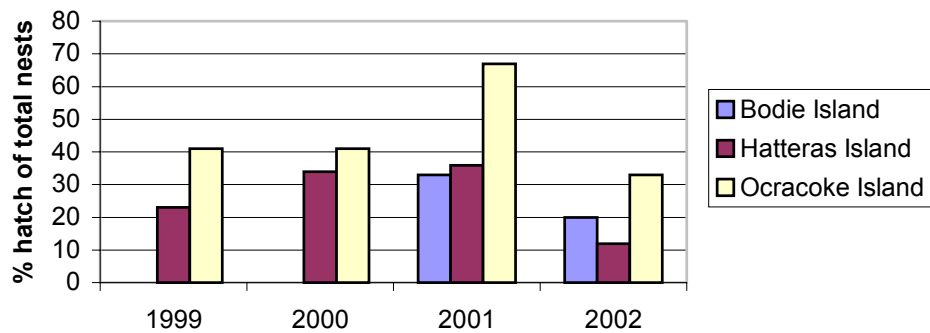
Table 3. American Oystercatcher Breeding Activity at Cape Hatteras National Seashore 2000

				Nests Lost or Abandoned						Chicks Fledged		Nests with Fledged Chicks		Productivity (fledglings/breeding pair)
Location	Pair	Nest	Egg			Nest	Hatch	Egg	Hatch					
	#	#	#	#	%	#	%	#	%	#	%	#	%	
Bodie Island	2	3	3	3	100%	0	0%	0	0%	0	0%	0	0%	0.00
Hatteras Island	23	29	82	19	66%	10	34%	21	26%	2	10%	2	7%	0.09
Ocracoke Island	12	17	40	10	59%	7	41%	11	28%	7	64%	5	29%	0.58
Totals	37	49	125	32	65%	17	35%	32	26%	9	28%	7	14%	0.24

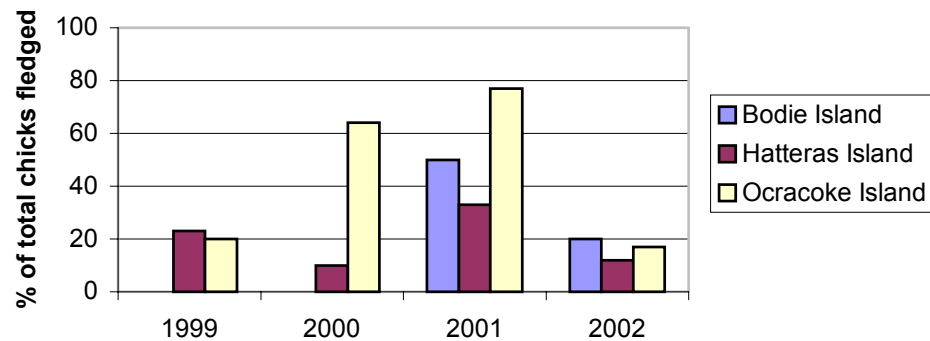
Table 4. American Oystercatcher Breeding Activity at Cape Hatteras National Seashore 1999

				Nests Lost or Abandoned						Chicks Fledged		Nests with Fledged Chicks		Productivity (fledglings/breeding pair)
Location	Pair	Nest	Egg			Nest	Hatch	Egg	Hatch					
	#	#	#	#	%	#	%	#	%	#	%	#	%	
Bodie Island	2	2	3	2	100%	0	0%	0	0%	0	0%	0	0%	0
Hatteras Island	24	31	71	24	77%	7	23%	13	18%	3	23%	3	10%	0.13
Ocracoke Island	15	17	36	10	59%	7	41%	10	28%	2	20%	2	12%	0.13
Totals	41	50	110	36	72%	14	28%	23	21%	5	22%	5	10%	0.12

**Chart 1. American Oystercatcher Nest Success
(1999 - 2002)**



**Chart 2. American Oystercatcher Fledge Success
(1999-2002)**



Supplement A

American Oystercatcher Banding data from North Carolina 2002

USFWS Band No.	Left leg (UL;LL/LL)	Right Leg (UR;LR/ LR)	Date	Location	Nest #	Age	Sex	Comments	Resights
805-60068	Y;GF/usfws	Y;O/R	3/28/02	NCB Mile 13.8		Adult			
805-60069	O;GF/usfws	O;Y/R	4/1/02	Battery Is.		Adult			
805-60070	W;G/usfws	B;-/-	4/1/02	Battery Is.		Adult			
805-60071	-;GF/usfws	-;W/R	5/13/02	Battery Is.	8	Chick			
805-60072	-;GF/usfws	-;O/B	5/13/02	Battery Is.	8	Chick			
805-60073	-;GF/usfws	-;B/W	5/13/02	Battery Is.	9	Chick			
805-60074	W;GF/usfws	W;R/R	5/17/02	NCB Mile 0		Adult			
805-60075	W;GF/usfws	W;Y/Y	5/21/02	Hatteras Is. Mile 28		Adult			
805-60076	W;GF/usfws	W;G/G	5/21/02	Hatteras Is. South Beach		Adult			
805-60077	-;G/usfws	-;Y/B	5/22/02	Ocrakoke Is.		Chick			
805-60078	W;GF/usfws	W;B/B	5/22/02	Ocrakoke Is.		Adult			
805-60079	W;G/usfws	-;Y/B	5/25/02	NCB Mile 9.55	4	Chick	Possibly Fledged		
805-60080	O;GF/usfws	O;W/W	5/27/02	SCB Mile 38		Adult			
805-60081	-;GF/usfws	-;Y/W	5/28/02	SCB The Spit		Chick			
805-60082	O;GF/usfws	O;O/O	5/28/02	SCB The Spit		Adult			
805-60083	O;GF/usfws	O;B/B	5/31/02	NCB Mile 6.15		Adult			
805-60084	B;GF/usfws	W;B/W	6/1/02	NCB Mile 8.4		Adult			8/23/02 Moores Landing, Cape Romain, SC.
805-60085	-;GF/usfws	W;R/W	6/1/02	NCB Mile 5.9	7	Chick	Fledged		
805-60086	R;GF/usfws	B;R/R	6/9/02	Hatteras Is. Buxton		Adult			8/23/02 Moores Landing, Cape Romain, SC.
805-60087	-;GF/usfws	-;O/G	6/11/02	Hatteras Is. Buxton		Chick	Fledged		
805-60088	R;GF/usfws	B;O/G	6/11/02	Hatteras Is. Buxton		Chick	Fledged		
805-60089	Y;GF/usfws	Y;Y/Y	6/11/02	Hatteras Is. Buxton		Chick	Fledged		8/23/02 Cape Romain, SC
805-60090	G;GF/usfws	R;Y/W	6/13/02	Hatteras Is. Buxton		Adult			8/23/02 Moores Landing, Cape Romain, SC.
805-60091	-;GF/usfws	Y;-/-	6/14/02	Ocrakoke Is.	2	Chick			
805-60092	R;GF/usfws		6/14/02	Ocrakoke Is.	11	Chick			
805-60093	R;GF/usfws	-;/G	6/16/02	NCB Mile 9.55	4	Chick	Fledged		
805-60094	-;GF/usfws	R;O/W	6/17/02	Battery Is.	11	Adult			
805-60095	W;GF/usfws	-;R/R	6/17/02	South Pelican Is.		Chick			
805-60096	Y;GF/usfws	B;-/O	6/17/02	South Pelican Is.		Chick			

805-60097	G;GF/usfws	-;W/G	6/18/02	Battery Is.	11	Adult	
805-60098	-;GF/usfws	-;R/R	6/18/02	Battery Is.	11	Chick	
805-60099	Y;GF/usfws	R;B/Y	6/18/02	South Pelican Is.		Adult	
805-60100	R;-/usfws	B;-/-	6/29/02	NCB Mile 9.55	4	Chick	Fledged
975-85201	-;GF/usfws	-;G/Y	7/1/02	NCB Mile 2.3	38	Chick	Fledged
975-85202	R;GF/usfws	-;G/Y	7/1/02	NCB Mile 2.3	38	Chick	Fledged

GF= green flag, G= green, Y= yellow, O= orange, R= red, B= blue, W= white, Usfws= numbered steel Fish and Wildlife Service band
Numbers preceded by a letter indicate the engraved # on the iodized "color bands"

Supplement B

American Oystercatcher Banding data from Cape Hatteras, North Carolina 2002

USFWS Band No.	Left leg (UL;LL/LL)	Right Leg (UR;LR/ LR)	Date	Location	Nest #	Age	Comments	Resights
805-60075	W;GF/usfws	W;Y/Y	5/21/02	Hatteras Is. Mile 28		Adult		
805-60076	W;GF/usfws	W;G/G	5/21/02	Hatteras Is. South Beach		Adult		
805-60077	-;G/usfws	-;Y/B	5/22/02	Ocrakoke Is.	O4	Chick		
805-60078	W;GF/usfws	W;B/B	5/22/02	Ocrakoke Is.		Adult		
805-60086	R;GF/usfws	B;R/R	6/9/02	Hatteras Is. Buxton	H18	Adult		8/23/02 Moores Landing, Cape Romain, SC.
805-60087	-;GF/usfws	-;O/G	6/11/02	Hatteras Is. Buxton	H17	Chick	Fledged	
805-60088	R;GF/usfws	B;O/G	6/11/02	Hatteras Is. Buxton	H18	Chick	Fledged	
805-60089	Y;GF/usfws	Y;Y/Y	6/11/02	Hatteras Is. Buxton	H18	Chick	Fledged	8/23/02 Cape Romain, SC
805-60090	G;GF/usfws	R;Y/W	6/13/02	Hatteras Is. Buxton	H17	Adult		8/23/02 Moores Landing, Cape Romain, SC.
805-60091	-;GF/usfws	Y;-/-	6/14/02	Ocrakoke Is.	O2	Chick		
805-60092	R;GF/usfws		6/14/02	Ocrakoke Is.	O11	Chick		